



E-Wheels™ Mobility Scooters

EW-88

Electric Trike



Read this manual completely before riding your mountain bike
www.ewheelsdealers.com

Contents

Riding Safety	4
· Safety Basics	5
· Operating Reminders and Suggestions	6
· Wet Weather Riding	7
· Night Riding	8
· Other Reminders	9
Specifications	9
Parts and Usage	10-17
Routine Operation	18
Battery Care and Maintenance.....	19
· Battery Charging	21
Other Maintenance	23
· Scheduled Maintenance	24
Warranty / Returns	24

Ewheels has developed a electrically assisted tricycle, called EW-88.

The EW-88 offers a comfortable and affordable alternative when normal cycling becomes too strenuous or the daily trip too long.

The EW-88 Electric Trike provides extra energy without much effort. The removable battery is hardly noticeable.

Cycling is a sport that fits easily into anyone's daily routine. With ease, you can cycle to work, cycle with the children to school, to the mall, to visit friends for coffee or just to enjoy the fresh air and nature. All this you can do relaxed with a EW-88 electric trike!

RIDING SAFETY

Like any sport, the EW-88 electric trike carries the risk of injury and damage. By choosing to ride the EW-88 you assume allresponsibility for these risks. Thus, you need to know and practice the rules of safe and responsible riding.

YOUR INSURANCE POLICIES MAY NOT PROVIDE
COVERAGE FOR ACCIDENTS INVOLVING THE USE OF
THIS TRICYCLE. TO DETERMINE IF COVERAGE IS
PROVIDED YOU SHOULD CONTACT YOUR INSURANCE
COMPANY OR AGENT.

Safety Basics: Do's and Don'ts

The Do's

- Always conduct a Safety Check before you ride your EW-88. Be thoroughly familiar with the controls of your EW-88.
- Always wear an approved helmet when riding your EW-88. Follow the helmet manufacturer's instructions for fit, use and care of your helmet.
- Always keep body parts and other objects away from the spinning wheels of your EW-88.
- Always wear shoes that will stay on your feet and will stay on the floorboard.
- Wear bright, visible clothing that is not so loose that it can catch on moving parts of the EW-88 or objects at the side of the road or trail.
- Think about your speed, and keep your speed consistent with safe operating conditions.

The Don'ts

- Never ride with headphones. They mask traffic sounds, distract you from concentrating on your surroundings, and their wires can tangle in the moving parts of the EW-88, causing you to lose control.
- Never carry a passenger. The maximum carrying capacity is 375 Lbs.
- Never ride barefoot or wearing sandals.

- Don't jump with your EW-88. It puts great stress on everything from frame and forks to drive train. Riders who insist on jumping their EW-88 risk serious bike damage as well as harm to themselves.
- Never carry anything which obstructs your vision or your complete control of the EW-88 or which could become entangled in the moving parts of the EW-88.
- Never hitch a ride by holding on to another vehicle.
- Never ride your EW-88 while under the influence of alcohol or other drugs.
- If possible, avoid riding in bad weather, when visibility is obscured, at dusk or in the dark, or when you are very tired. Each of these conditions increases the risk of accident.
- Never allow children to ride. Never allow others to ride without reading and understanding these instructions.

Operating Reminders and Suggestions

- Review all instructions carefully before riding the EW-88.
- Follow all rules and regulations in your area for operating a motorized tricycle. Obey the same road laws as all other road vehicles, including yielding the right-of-way to pedestrians, and stopping at red lights and stop signs.
- Ride predictably and in a straight line. Never ride against traffic.
- Ride defensively. To other road users, you may be hard to see.

- Concentrate on the path ahead. Avoid potholes, gravel, dirt, wet road, oil, curbs, speed bumps, drain grates and other obstacles.
- Be alert for unexpected events, such as opening car doors or cars backing out of concealed driveways.
- Be extra careful at intersections and when preparing to pass other vehicles.
- Don't carry packages or passengers that will interfere with your visibility or control of the bike. Don't use items that may restrict your hearing.
- Maintain a comfortable stopping distance from all other riders, vehicles and objects. Safe braking distance and forces are subject to the prevailing weather and road conditions.

Wet Weather Riding

Wet weather impairs traction, braking and visibility, both for the rider and for other vehicles sharing the road. The risk of accident is dramatically increased in wet conditions. In wet weather you need to take extra care. In wet conditions, the stopping power of your brakes (as well as the brakes of other vehicles sharing the road) is dramatically reduced. This makes it harder to control speed and easier to lose control. To make sure that you can slow down and stop safely in wet conditions, apply your brakes earlier and more gradually than you would under normal, dry conditions.

Decrease your riding speed, avoid sudden braking, and take corners with additional caution. Keep in mind that there is a direct, but inverse, relationship between speed and controllability.

Be more visible on the road. Wear reflective clothing and use safety lights.

Potholes and slippery surfaces such as lane markings and train tracks all become more hazardous when wet.

Night Riding

A rider is very difficult for motorists to see at dusk, at night, or at other times of poor visibility. If you must ride under these conditions, check and be sure you comply with all local laws about night riding; follow the Rules of the Road, and take the following precautions:

Make sure that your EW-88 is equipped with correctly positioned and securely mounted reflectors. Make sure your clothing or cargo does not obstruct a reflector or light.

Wear light colored, reflective clothing and accessories, any reflective device or light source that moves will help you get the attention of approaching motorists, pedestrians and other traffic.

Ride slowly. Avoid hazards, such as potholes and curbs.

Avoid areas of heavy traffic, dark areas, and roads with speed limit over 35 MPH. If possible, ride on routes already familiar to you.

Ride at night only if necessary. Slow down and use familiar roads with street lighting, if possible.

Other Reminder

The battery does NOT require deep discharging. If your EW-88 is put into storage, re-charge its battery at least once every 90 days.

Do not store your EW-88 in direct sunlight for an extended time.

Store your EW-88 in a dry place. Exposing your EW-88 to rain, snow, or other precipitation may result in damage.

SPECIFICATIONS

EW-88

COLORS: Red, Blue

POWER: Electric

WATTS: 450 watt

MOTOR TYPE: Brushless motor rear drive

AMPS: 12 AH

VOLTS: 48 volt

BATTERIES: Lead acid

TIRE SIZE: Front: 20"*1.75": Rear: 22"*1.75"

CHARGER: Smart charger included

SPEED: Up to 17MPH

DISTANCE: Up to 18-25 miles per charge-can still pedal if charge is lost (distance varies by riders weight , terrain, road surface etc.)

THROTTLE TYPE: Variable speed control- Twist Throttle-or-pedal assisted

KEY START: Yes

FRAME TYPE: Steel

BRAKING SYSTEM: Front drum brake, rear brake expansion brake

DRIVE SYSTEM: Rear hub motor (motor is in rear rim) or Pedal Power

HEAD LIGHT: Yes

CARTON SIZE: Shipped on a pallet

SHIPPING WEIGHT: 149 lbs

BICYCLE WEIGHT: 125 lbs

ELECTRIC LIGHT: Yes

BATTERY INDICATOR: Yes

STORAGE BASKET: Yes



Key Power

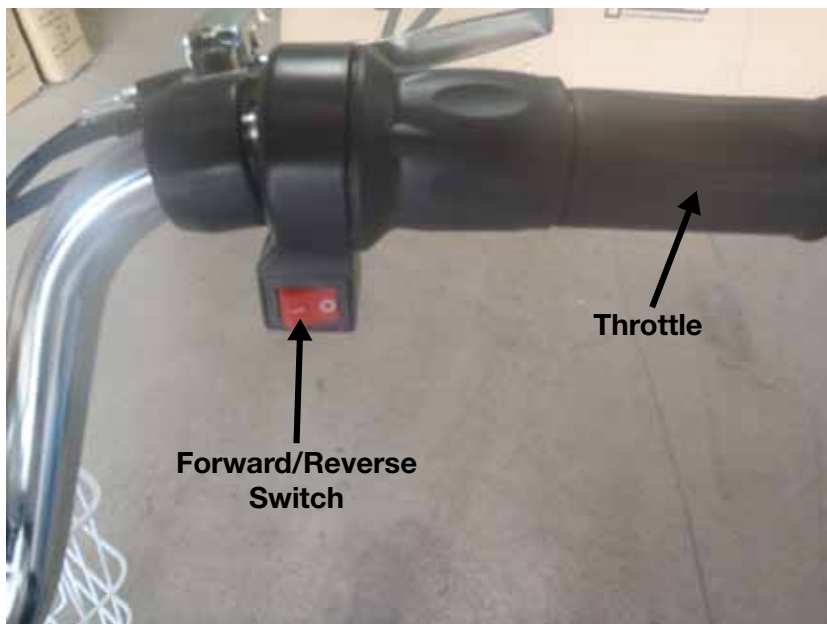
Insert key and turn to power on electronic.



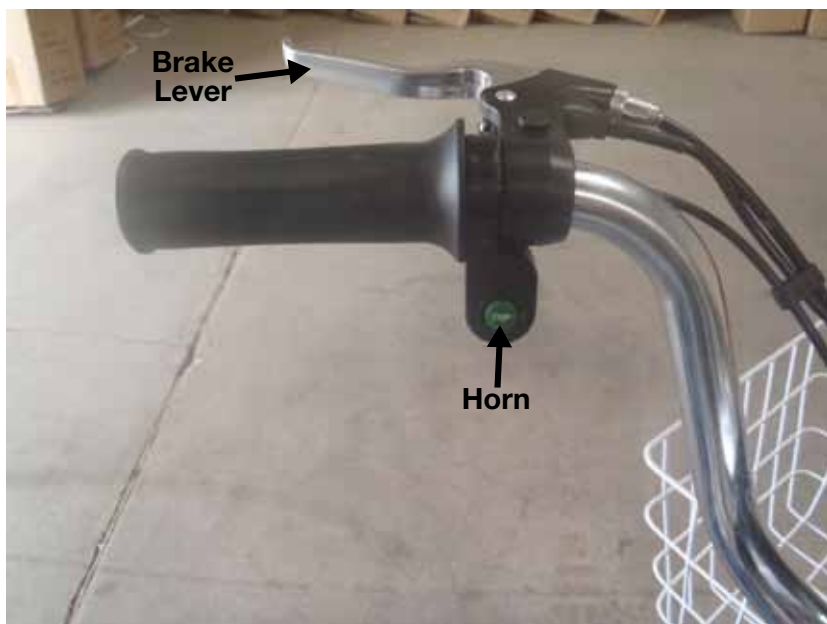
Battery Indicator

Light

Power Light



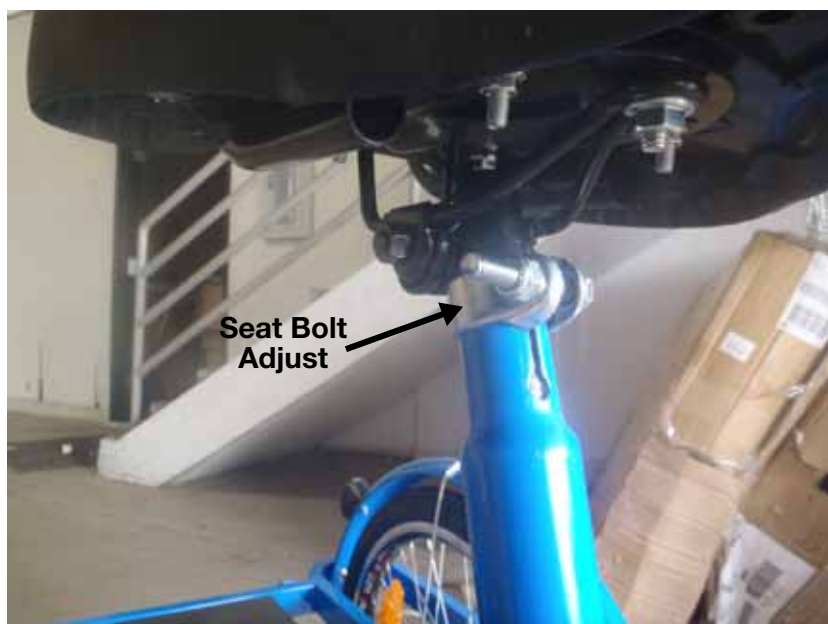
Twist throttle to engage electric motor.

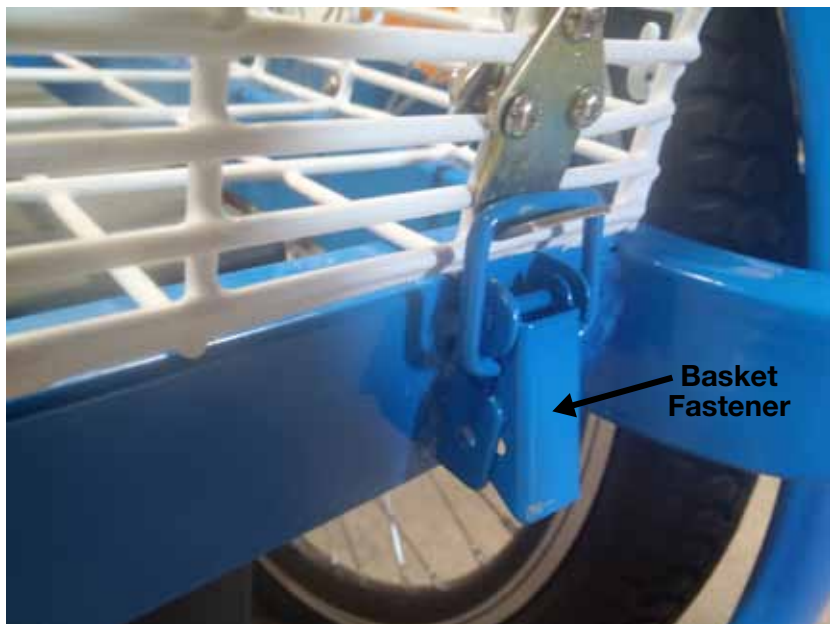


Press horn (green circle) to engage horn.



Squeeze break lever and push down break lock.

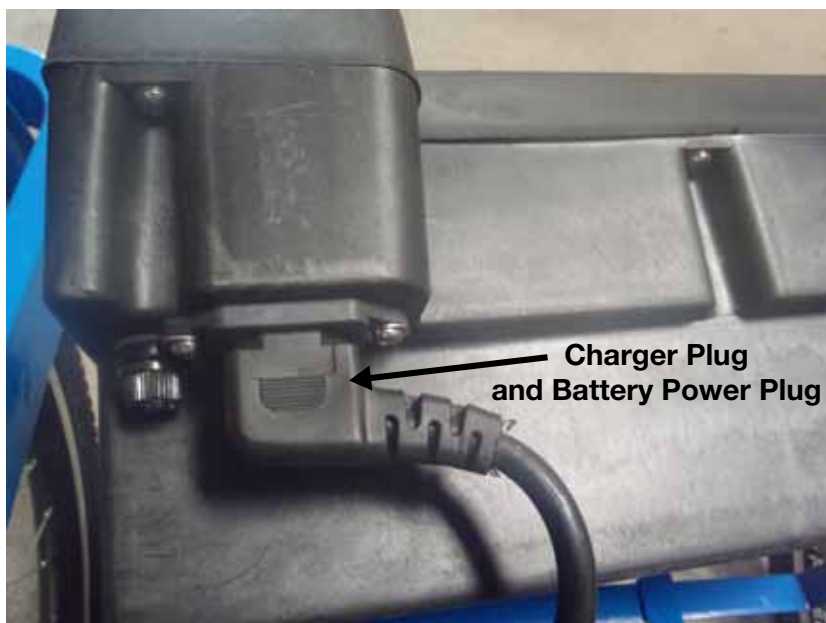




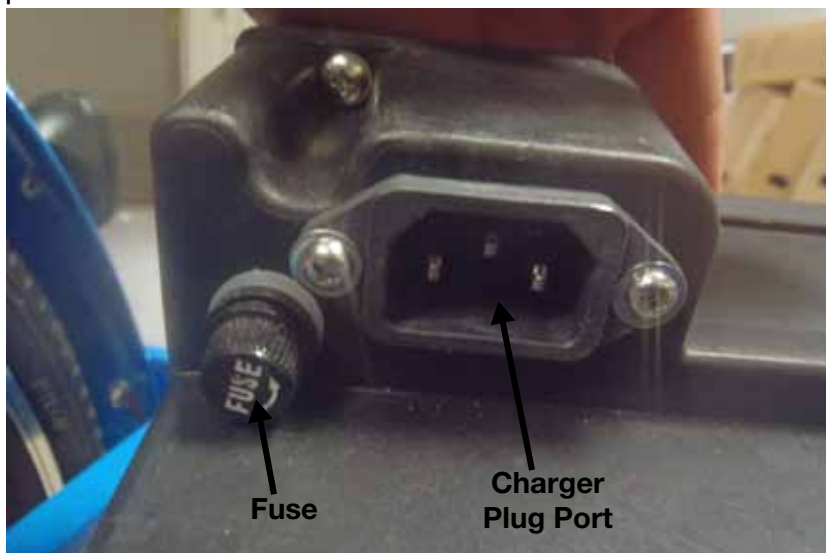
Remove basket simply flip up all four break fasteners.



Turn key to lock or unlock bike battery.



It is important to insert bike power plug into the charger plug port.



Remove the fuse cap to replace the fuse.

The charger plug port can be used to charge the battery by simply inserting charger plug directly into the charger port.



Both front and rear brakes can be adjusted by adjusting the brake cable to your satisfaction.



The hub motor plug must be pulled apart to remove the front wheel.

ROUTINE OPERATION

Pre-Ride Check

- 1)** Be sure the tires have enough air. A low tire pressure risk rim pinching (tube failure) and lowers your range (distance per charge).
- 2)** Be sure the battery is fully charged. Riding on a low state-of-charge will reduce range, and can damage the battery.
- 3)** Verify the proper adjustment and function of the brakes.
- 4)** Make sure the EW-88 is in good mechanical order. Visually inspect and hand-check the vehicle, and snug any loose bolts, screws, or other fasteners.
- 5)** With the EW-88 visually inspected, turn the key switch and apply the throttle, to verify the motor's smooth operation. Apply the brake to stop the motor. Verify that the throttle is inoperative when either brake is applied.

Battery Care and Maintenance

What to Expect of Your Batteries

The battery is a sealed lead acid type. With normal use, it can last for well over 400 charge/discharge cycles.

Know that normal use should mean partial, and not complete discharging. If you employ “shallow” discharge cycles, using less than 30% of battery’s capacity, the battery can achieve up to 600 charge/discharge cycles.

Thus, it is good to charge the battery after each ride. A partial discharge will require less time on the chargers.

What to Expect, Realistically

The battery can keep its performance for about 400 charge/discharge cycles, with high current and deep (80%) discharging. The storage capacity of the battery will decline after 200 times recharging. If you re-charge the battery before it is exhausted, you dramatically extend the battery’s cycle life.

In Summary

Always try to recharge the Battery Pack within 24 hours after use to maximize battery cycle life and prevent damage.

What's Inside Your EW-88 Battery

The Battery is composed of 4-12 Volt, 12 Amp-hour capacity batteries in series, for a total capacity of 48 V, 12 Ah.

The component batteries are a standard, commercially available size. Keep this in mind, however, should you choose to service your battery.

- 1)** The batteries are soldered into place. Replacing batteries will require soldering equipment and skills.
- 2)** Batteries can be extremely dangerous. If allowed to short-circuit, they can cause burns, create blinding arcs, or explode, causing serious injury. If you accept this risk, work slowly, and exercise utmost care! Work with only one wire at one time.

Battery Trouble

Should a battery ever leak, do not touch the battery liquid. If you are exposed to the solution, flush the affected area with water. If you must handle the battery, wear disposable gloves.

Replace the battery if there are leaks, visible breaks or cracks.

Dispose of used batteries by taking them to a recycling center, or according to state and local laws.

Battery Temperature Sensitivity

Ambient temperature will affect almost every kind of battery. Usually, the battery shows good discharging capability at higher air temperature. When the air

temperature is under 0 °F, the battery power will decline more than one third. So it is natural that the EW-88 will not reach its normal mileage in winter or in cold weather. When the air temperature is up to 68 °F, the EW-88 will achieve its normal range capability.

When the ambient temperature is over 110 °F (as when exposed to summer sunshine for a long period), batteries and other electric components usually run in an abnormal fashion.

Battery Charging

Be sure to charge the battery completely if you will not use it for a long period. Ideally, you should charge it every 20 days. Even a healthy battery will discharge itself slowly. Even with its power off, the EW-88 Battery state-of-charge will decline gradually over time.

Remember to fully charge the battery before your first ride. The battery may be low when you receive your new EW-88.

- 1)** While charging the Battery, keep the key switch OFF.
- 2)** Verify that you are using the correct charger for your vehicle, and that the charger input power is compatible the “house current” in your area.
- 3)** Keep the charger and battery away from water to prevent electrical shock and shorting. The charger is intended for indoor use only.

- 4) Plug the end of the charger's cord into the socket of the **adaptor** first. Next connect the adaptor to the EW-88 (the charger port is located below the rear basket). Then plug the chargers' AC cords into the wall outlet.
- 5) Read the charger label to learn about the charger indicator lights, and their meanings.
- 6) Generally, a short drive will require a short time to re-charge, and a long ride will require a longer time. A complete (90%) discharge may require 6 hours to recharge. To prevent electrolysis (battery fluid loss by hydrogen generation,) do not charge for longer than eighteen hours.

Before riding the electric trike for the first time, you must charge the batteries for 4-6 hours using the supplied charger. To charge, pull the protective cover from the charging sockets. Then plug the charger into the charging sockets, and plug the chargers into a wall outlet.

WARNING

Do not place the battery near heat or fire. Do not expose the chargers to water.

Front and Rear Tires

The changing method of the front tire is the same as common tricycle. It is more complex to change the rear tire because of the motor and brake assemblies, and associated wiring and cabling. If you are not comfortable with undertaking this operation, you can ask your servicing dealer or mechanic to change it.

Lubrication

You should inspect and maintain your EW-88 and lubricate the mechanical power transmission components. The brake cables may also need lubrication.

Lubricate the brake cables with silicone or graphite lubricant. Maintenance period: one month.

Lubricate the fork Shock Absorber tube, axle rim, and the axle ball bearing with SH/T0386 lubricant, bicycle or lithium grease. Maintenance period: one year.

Cleaning

- 1) Never wash the bike using high-pressure water, as it will cause damage to the electric bike.
- 2) Never use lubricant to clean the metal parts of the bike and never apply lubricant to the drum brake and the tire.

Scheduled Maintenance

EW-88 should be checked from time to time. Refer to the maintenance schedule in the following chart:

Check ● adjust ♦ lubricate ■

Parts	daily	30 days	180 days
Bolts, nuts, screws etc-to ensure that nothing is loose.	●	● ♦	● ■
Tire pressure-to ensure good tire pressure	●		
Drive equipment-to ensure good position; not too loose, nor too tight.	●	● ♦	● ■
Brake pads-to ensure it is not worn out.		● ♦	● ♦
Wheel rim- to ensure it is not distorted.		●	●
Steering Linkage- to ensure it is not distorted.		●	●
Brake-to ensure it is working properly.	●	● ♦	● ♦
Throttle- to ensure that it is working properly.	●		
Steering system-to ensure operation is normal.	●	■	
Wheel axle- to ensure if it is loose	●		■
Motor-to see if it is working properly.	●	♦	♦

If you find problems that you cannot solve them yourself during your inspection and maintenance, please contact dealer for help. Never take apart or repair the bike by yourself. If it causes any problem and voids the warranty, a service fee will be imposed.